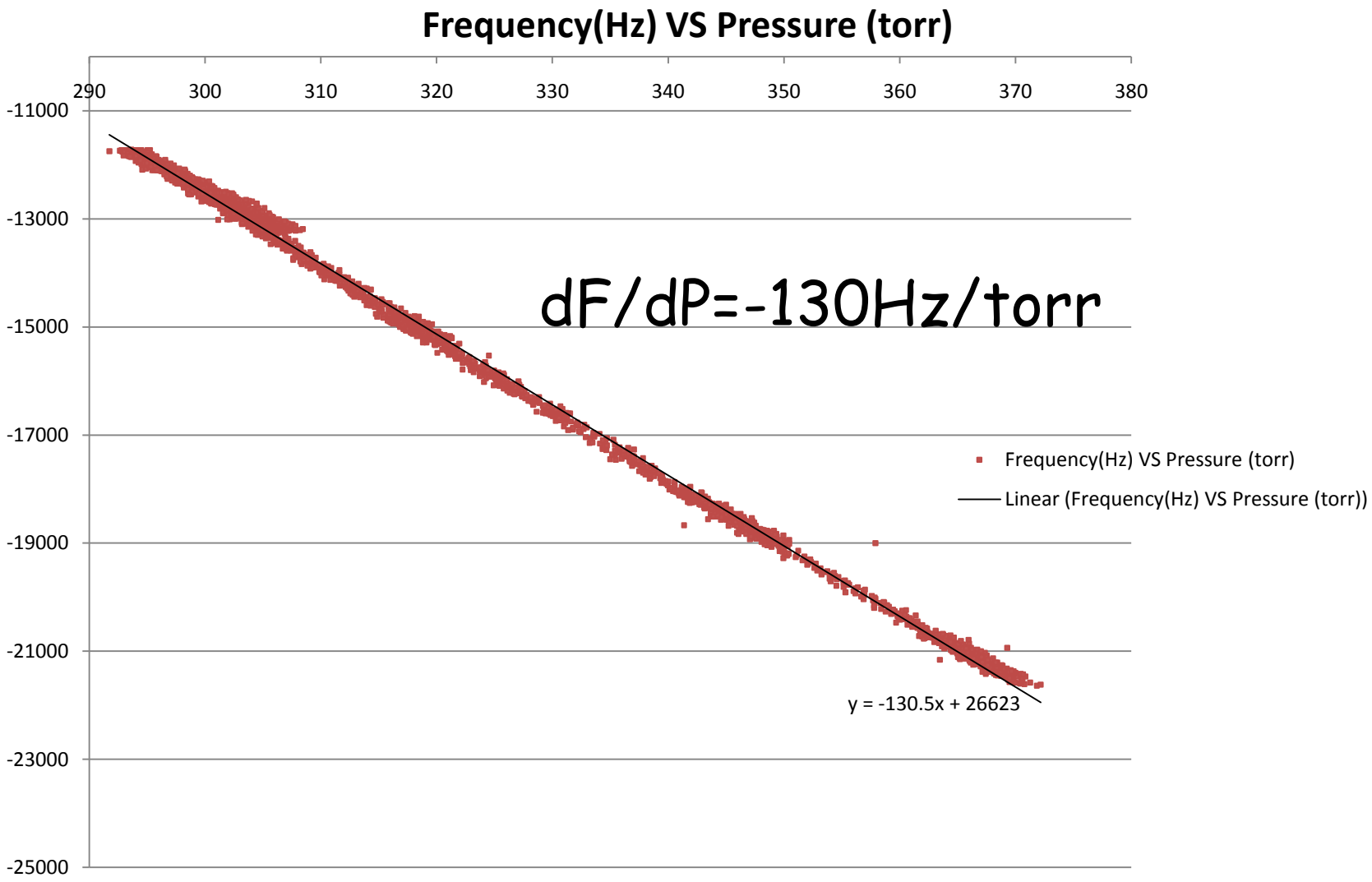
SSR1
LFD (static) and dF/dP

Cavity frequency change VS. Pressure fluctuations
cavity constrained with tuner (forces ~600kg per side)



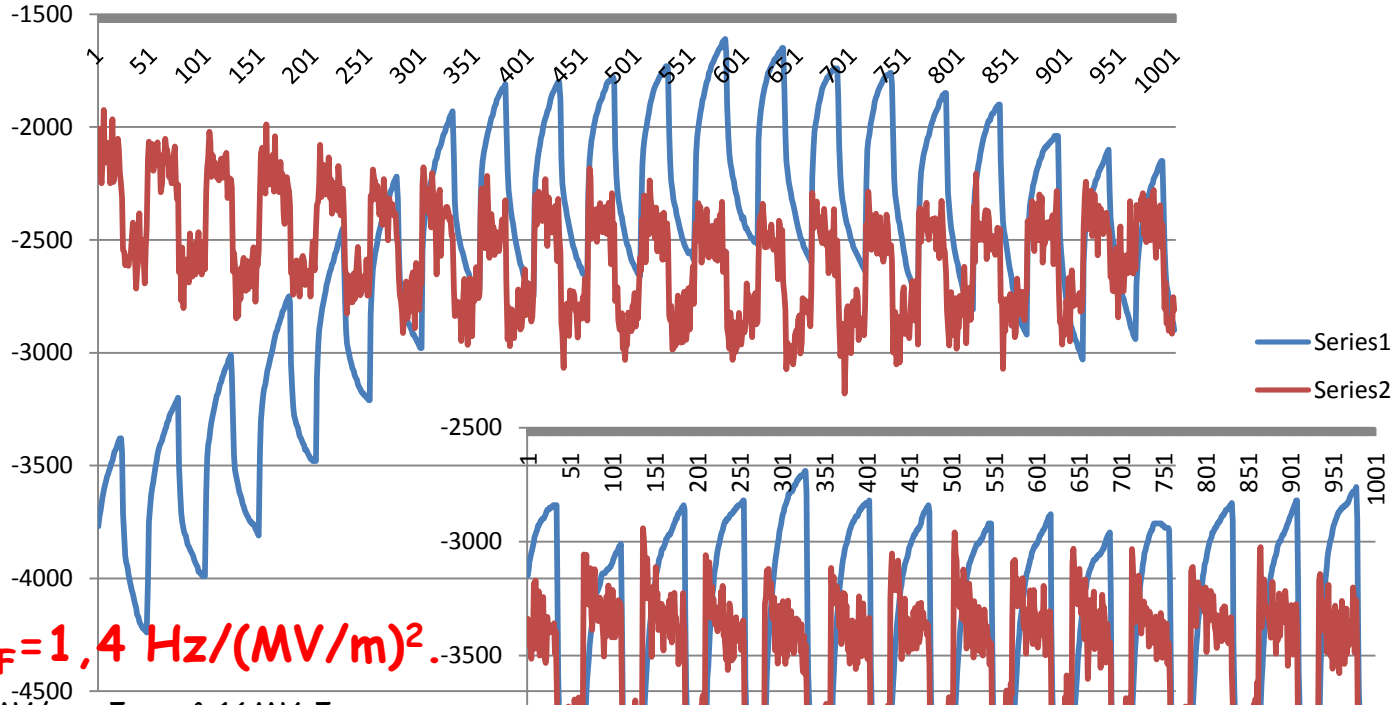
Lorentz Force Detuning (static) of SSR1 cavity.

Power on cavity cycled:

(1) 3MV/m –10sec & 20MV-5sec. (2) 3MV/m – 5sec & 16MV-5sec.

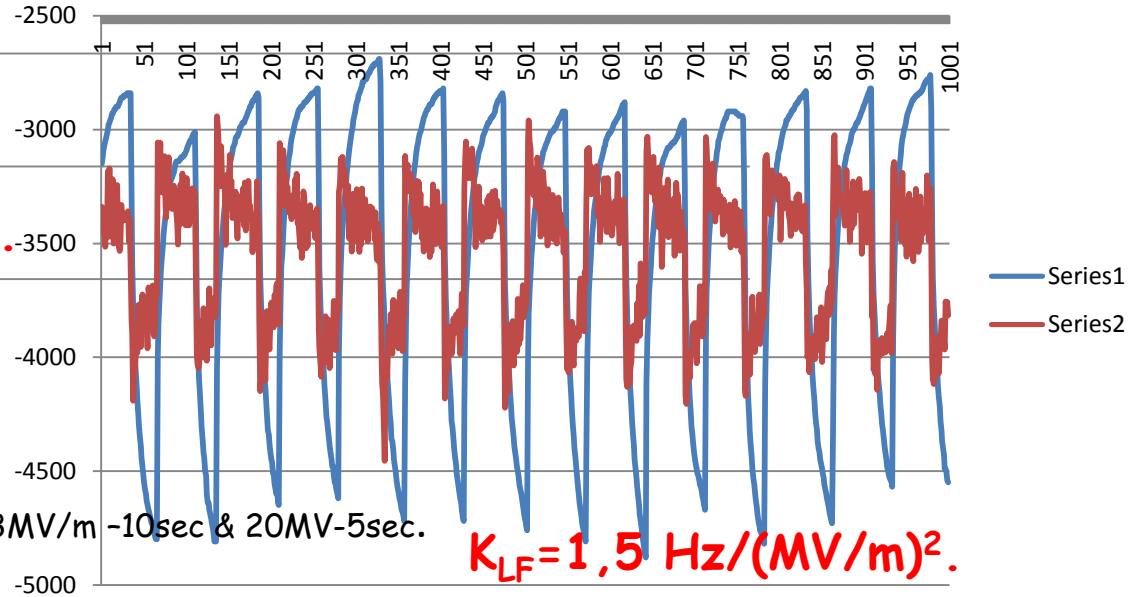
Blue line –without dF/dP compensation… Red line - after dF/dP compensation.

LF detuning coefficient → K_{LF} . ($DF=-K_{LF}*Eac^2$);



K_{LF}=1,4 Hz/(MV/m)^2.

(2) 3MV/m – 5sec & 16MV-5sec.



(1) 3MV/m –10sec & 20MV-5sec.

K_{LF}=1,5 Hz/(MV/m)^2.